

TPS62175DQCR

Quality, reliability & packaging data download

Status: ACTIVE

Report date: 08/29/2025



Assembly site: TI PHILIPPINES CLARK A/T

RoHS	Yes
REACH	Yes
Device marking	62175
Lead finish/Ball material	NiPdAu
MSL rating/Peak reflow	Level-1-260C-UNLIM
Rating	Catalog

Material content

Homogeneous Material Level						Component Level	
Component	Substance	CAS Number	Amount (mg)	Percentage %	ppm	Percentage %	ppm
Bond Wire							
Copper and Its Alloys	Copper	7440-50-8	0.046843	99.989327	999893	0.256735	2567
Not Categorized	Proprietary Materials	—	0.000004	0.008538	85	0.000022	0
Precious Metals	Silver	7440-22-4	0.000001	0.002135	21	0.000005	0
Sub-total	—	—	0.046848	100	1000000	0.256763	2568
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.300096	80.000000	800000	1.644753	16448
Thermoplastics	Epoxy	85954-11-6	0.075024	20.000000	200000	0.411188	4112
Sub-total	—	—	0.375120	100	1000000	2.055942	20559
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	10.7272	97.520000	975200	58.793182	587932
Copper and Its Alloys	Iron	7439-89-6	0.253	2.300000	23000	1.386632	13866
Copper and Its Alloys	Phosphorus	7723-14-0	0.0033	0.030000	300	0.018086	181
Zinc and Its Alloys	Zinc	7440-66-6	0.0165	0.150000	1500	0.090432	904
Sub-total	—	—	11.0000	100	1000000	60.288333	602883
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.313896	95.120000	951200	1.720388	17204
Precious Metals	Gold	7440-57-5	0.002574	0.780000	7800	0.014107	141
Precious Metals	Palladium	7440-05-3	0.01353	4.100000	41000	0.074155	742
Sub-total	—	—	0.330000	100	1000000	1.808650	18086
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	4.984067	87.999992	880000	27.316463	273165
Other Organic Materials	Carbon Black	1333-86-4	0.016991	0.299998	3000	0.093124	931
Other Organic Materials	Chlorine	7782-50-5	0.000057	0.001006	10	0.000312	3
Thermoplastics	Epoxy	85954-11-6	0.662598	11.699004	116990	3.631539	36315
Sub-total	—	—	5.663713	100	1000000	31.041438	310414
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.829972	100.000000	1000000	4.548875	45489
Sub-total	—	—	0.829972	100	1000000	4.548875	45489
Total	—	—	18.245653	—	—	100	1000000

Assembly site: TI Semiconductor

RoHS	Yes
REACH	Yes
Device marking	62175
Lead finish/Ball material	NiPdAu
MSL rating/Peak reflow	Level-1-260C-UNLIM
Rating	Catalog

Material content

				Homogeneous Material Level		Component Level	
Component	Substance	CAS Number	Amount (mg)	Percentage %	ppm	Percentage %	ppm
Bond Wire							
Copper and Its Alloys	Copper	7440-50-8	0.050106	96.552654	965527	0.276055	2761
Not Categorized	Proprietary Materials	—	0.000002	0.003854	39	0.000011	0
Precious Metals	Gold	7440-57-5	0.000305	0.587725	5877	0.001680	17
Precious Metals	Palladium	7440-05-3	0.001481	2.853839	28538	0.008159	82
Precious Metals	Silver	7440-22-4	0.000001	0.001927	19	0.000006	0
Sub-total	—	—	0.051895	100	1000000	0.285912	2859
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.300096	80.000000	800000	1.653358	16534
Thermoplastics	Epoxy	85954-11-6	0.075024	20.000000	200000	0.413339	4133
Sub-total	—	—	0.375120	100	1000000	2.066697	20667
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	10.62968	97.520000	975200	58.563471	585635
Copper and Its Alloys	Iron	7439-89-6	0.2507	2.300000	23000	1.381214	13812
Copper and Its Alloys	Phosphorus	7723-14-0	0.00327	0.030000	300	0.018016	180
Zinc and Its Alloys	Zinc	7440-66-6	0.01635	0.150000	1500	0.090079	901
Sub-total	—	—	10.90000	100	1000000	60.052780	600528
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.313896	95.120000	951200	1.729388	17294
Precious Metals	Gold	7440-57-5	0.002574	0.780000	7800	0.014181	142
Precious Metals	Palladium	7440-05-3	0.01353	4.100000	41000	0.074543	745

Sub-total	—	—	0.330000	100	1000000	1.818112	18181
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	4.984067	87.999992	880000	27.459365	274594
Other Organic Materials	Carbon Black	1333-86-4	0.016991	0.299998	3000	0.093611	936
Other Organic Materials	Chlorine	7782-50-5	0.000057	0.001006	10	0.000314	3
Thermoplastics	Epoxy	85954-11-6	0.662598	11.699004	116990	3.650537	36505
Sub-total	—	—	5.663713	100	1000000	31.203827	312038
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.829972	100.000000	1000000	4.572672	45727
Sub-total	—	—	0.829972	100	1000000	4.572672	45727
Total	—	—	18.150700	—	—	100	1000000

MTBF/FIT estimates

MTBF / FIT			MTBF / FIT supporting data						
MTBF	FIT	Usage temp (°C)	Conf level (%)	Activation energy (eV)	Test temp (°C)	Test duration (hours)	Sample size	Fails	Additional comments
9.99999999×10^9	0.1	55	60	0.7	125	1000	183306	0	—

Qualification summary

Stress	Reference	Min lot qty	SS / lot	Condition	Duration	Result	Notes
HTOL	JESD22-A108	3	77	Life test, 125C	1000 hours	Pass	Or equivalent JEDEC condition
HTSL	JESD22-A103	3	25	High temp storage bake, 150C	1000 hours	Pass	Or equivalent JEDEC condition
AC/UHAST	JESD22-A102/JESD22-A118	3	25	Unbiased HAST 130C / 85% RH	96 hours	Pass	Or equivalent JEDEC condition
THB/HAST	JESD22-A101/JESD22-A110	3	25	HAST 130C/85%RH	96 hours	Pass	Or equivalent JEDEC condition
TC	JESD22-A104	3	25	Temperature cycle -65/150C	500 cycles	Pass	Or equivalent JEDEC condition
SD	J-STD-002	3	22	Per specification	>95% lead coverage	Pass	—
HBM	JS-001	1	3	ESD - HBM	Classification	See data sheet	—
CDM	JS-002	1	3	ESD - CDM	Classification	See data sheet	—
LU	JESD78	1	3	Latch-up	Per JESD78	Pass	As applicable per JESD78
MSL	J-STD-020	—	—	Per J-STD-020	Classification	See data sheet	—

Ongoing reliability monitoring

FAB process reliability data

Fab Process	Reliability Test	Rolling Year (3Q2024 - 2Q2025) Sample Size	Cumulative Sample Size	Disposition
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Power BICMOS	Life test 125C, 1000 Hours or Equivalent JEDEC Condition	25457	425749	Pass
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Assembly process reliability data

Package Family	Reliability Test	Rolling Year (3Q2024 - 2Q2025) Sample Size	Cumulative Sample Size	Disposition
SON	Biased HAST 130C/85%RH, 96 Hours or Equivalent JEDEC Condition	2849	75543	Pass
SON	High temp storage bake 150C, 1000 Hours or Equivalent JEDEC Condition	3133	56922	Pass
SON	Temperature cycle -65/150C, 500 Hours or Equivalent JEDEC Condition	9808	139022	Pass
SON	Unbiased HAST 130C/85% RH, 96 Hours or Equivalent JEDEC Condition	5236	112595	Pass

Additional resources

[General quality guidelines](#)

[Certifications](#)

[Conflict minerals specialized disclosure report](#)

[Restricted chemical test report](#)

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